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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/745,914	12/22/2000	Antonius Henricus Maria Raaijmakers	PHN 17,819	2618
24737	7590	10/06/2003	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			CHUNG, DAVID Y	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/745,914

Applicant(s)

RAAIJMAKERS ET AL.

Examiner

David Y. Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 4-6 rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsu (JP 62-299035).

As to claim 1, Tsutsu discloses an electro-optical device having an ITO layer, silicon oxide layer, and silicon nitride layer formed in that order on a transparent substrate. See abstract. Note in figure 1, ITO electrode 2, silicon oxide layer 3, and silicon nitride layer 5.

As to claim 4, figure 1 clearly shows an intermediate layer of silicon oxide 3 between the ITO layer 2 and silicon nitride layer 5. The abstract explicitly states that the silicon nitride layer is formed by plasma CVD.

As to claim 5, the abstract explicitly states that the silicon oxide layer 3 is provided prior to the silicon nitride layer 5.

As to claim 6, the silicon oxide layer protects the ITO layer during manufacturing of the silicon nitride layer.

2. Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by Arita et al. (JP 64-008667).

Arita et al. teaches enhancing the bondability of a protective layer formed on a photoelectric converter. See abstract. Note in figure 1, the ITO electrode 15, silicon oxide insulator 18a, and silicon nitride insulator 18b. Because the silicon nitride insulator 18b is overlaid on top of the ITO electrode 15, the ITO layer must have been formed before the silicon nitride layer.

3. Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (JP 01-245226).

Tanaka et al. teaches preventing the deterioration of image quality by forming a silicon oxide layer on an ITO layer at the same pattern as the pattern of the ITO layer so that the ITO layer is prevented from being reduced even if a silicon nitride layer is used as a protective film. See abstract. Figures 1(a)-1(d) show the manufacturing steps. Figure 1(b) shows the steps of forming and patterning the ITO layer 6 and silicon oxide layer 7. Figure 1(d) shows the final step of overlaying the entire surface with silicon nitride layer 13.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (JP 01-245226).

As to claim 4, Tanaka et al. does not disclose the method of forming the silicon nitride layer 13. Chemical vapor deposition (CVD) was a conventional technique that was well known for being cost-effective and reliable. It would have been obvious to one of ordinary skill in the art at the time of invention to form the silicon nitride layer using chemical vapor deposition because it was cost-effective and reliable.

As to claim 5, the silicon oxide layer is clearly provided before the silicon nitride layer since the silicon nitride layer is overlaid over the silicon oxide layer.

As to claim 6, the ITO layer is protected during formation of the silicon nitride layer by the silicon oxide layer.

5. Claims 4-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Arita et al. (JP 64-008667).

As to claim 4, Arita et al. discloses forming the silicon nitride layer 13 using sputtering, instead of chemical vapor deposition. However, it was well known that sputtering and chemical vapor deposition were functionally equivalent alternatives, as evidenced by Tsutsu. It would have been obvious to one of ordinary skill in the art at the time of invention to form the silicon nitride layer using chemical vapor deposition instead of sputtering, since the two methods were art recognized equivalents.

As to claim 5, the silicon oxide layer is clearly formed before the silicon nitride layer since the silicon nitride layer is overlaid over the silicon oxide layer.

As to claim 6, the ITO layer is protected during formation of the silicon nitride layer by the silicon oxide layer.

6. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsu (JP 62-299035) in further view of Senior (U.S. 6,466,686), Itsumi et al. (U.S. 5,559,504), Fujiwara (U.S. 6,185,319), and Harkin (U.S. 6,327,376).

Tsutsu does not teach using the disclosed electro-optical device as part of a fingerprint sensing apparatus. However, it was well known to use an electro-optical

device as part of a fingerprint sensing apparatus in order to display information.

Evidence of this is provided in the disclosures of Harkin (column 9, lines 13-29), Itsumi et al. (column 11, lines 19-30), Senior (column 4, lines 8-13), and Fujiwara (column 9, lines 20-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the electro-optical device of Tsutsu in a fingerprint sensing apparatus in order to display information.

7. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (JP 01-245226) in further view of Senior (U.S. 6,466,686), Itsumi et al. (U.S. 5,559,504), Fujiwara (U.S. 6,185,319), and Harkin (U.S. 6,327,376).

Tanaka et al. does not teach using the disclosed active matrix device as part of a fingerprint sensing apparatus. However, it was well known to use a reader as part of a fingerprint sensing apparatus in order to display information. Evidence of this is provided in the disclosures of Harkin (column 9, lines 13-29), Itsumi et al. (column 11, lines 19-30), Senior (column 4, lines 8-13), and Fujiwara (column 9, lines 20-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the active matrix device of Tanaka et al. in a fingerprint sensing apparatus in order to display information.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

David Chung
GAU 2871
09/19/03


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